

Drawings

The attached sheets of drawings include changes to FIG. 1, FIG. 3, FIG. 4, FIG. 7 and FIG. 8. The above noted figures have been amended to include suitable title legends that reflect the functions and purpose of the depicted features. For purposes of clarity, FIG. 1, FIG. 3 and FIG. 4 has also been labeled as prior art. No new matter is being introduced with these new drawings.

Remarks

This reply is being filed within three months of the mailing date of the Office Action. Based on this remarks and amendments, reconsideration of this Application is respectfully requested.

Status of Claims

Claims 1-18 are pending in the application, with claims 1 and 10 being the independent claims. The rejection of the all the claims (i.e., claims 1-18) is traversed below. Applicants have amended the claims to address certain issues of formality that applicants' representative noted. For example, "characterized by comprising" was amended to "comprising" in claims 1, 5, 6, 10 and 15 to reflect common practice, "by means of" was amended to "using" in claims 8 and 17 to make clear that Applicants do not intend "means for" language, and elements (a) and (b) of claim 1 were amended to improve readability of the claim. The amended claims are supported by the original claims and throughout the specification. Applicants believe that no new matter has been introduced.

Based on the following remarks, Applicants respectfully request that the Examiner reconsider all outstanding objections and rejections and that they be withdrawn.

Rejections under 35 U.S.C. § 102

Claims 1-8, and 10-17

Claims 1-8, and 10-17 were rejected under 35 U.S.C. § 102(b) as being allegedly anticipated by Riley *et al.*, U.S. Patent 6,507,391 ("Riley"). Applicants respectfully traverse the rejections.

As currently amended, claim 1 recites a method for measuring and analyzing data contained within pulses of an analog electronic signal derived from optical measurements in a flow cytometer, the electronic signal comprising a first data channel, the method comprising the steps of:

- (a) removing a DC offset from the signal with a base line restoration circuit to obtain a base line restored signal;
- (b) transforming the base line restored signal with a logarithmic amplifier;
- (c) sampling the transformed signal with an analog-to-digital converter so as to produce a digital signal; and
- (d) analyzing the digital signal with an electronic processor. (emphasis added).

Riley does not teach or suggest each and every feature of claim 1. For example, the Examiner asserts that claim 1 element (a) is taught by Riley. (*See* the Office Action at p. 3.) Applicants disagree. Neither Figure 6 and column 16, lines 16-20 (as pointed to by the Examiner) nor any other section of Riley teaches "removing a DC offset from the signal **with a base line restoration circuit** to obtain a base line restored signal" (emphasis added) as recited by the Applicant's in claim 1 element (a).

In contrast, Riley teaches removing a DC component by specifically using a bandpass filter. Riley, 16:16-17, 22:53-58, 28:52-55. Applicants respectfully submit that a bandpass filter and a base line restoration circuit are distinct electronic components, each having a set of unique features. Applicants further submit that, as the term is generally used in the art, a bandpass filter is not synonymous with a base line restoration circuit.

With regard to claim 1, the Examiner also asserts that claim 1 element (b) is taught by Riley. (*See* the Office Action at p. 3.) Applicants disagree. Neither Figure 6 and column 16, lines 16-20 (as pointed to by the Examiner) nor any other section of Riley teaches "transforming the base line restored signal **with a logarithmic amplifier**" as recited by the Applicants in claim 1.

In contrast, Riley specifically teaches the use of a variable-gain amplifier. Riley 16:20-21, 22:51-58, 26:48-49, 28:50-52, 30:52-54. Applicants respectfully point out that a variable gain amplifier and a logarithm amplifier are distinct electronic components.

In further contrast, as shown in FIG. 6 of Riley, the signal is input to the variable gain amplifier before the DC offset is removed, whereas claim 1 recites "transforming the base line restored signal."

It is respectfully pointed out that anticipation can only be established by a single prior art reference that discloses each and every element of the claimed invention. RCA Corp. v. Applied Digital Data Systems, Inc., 730 F.2d 1440 (Fed. Cir. 1984). Therefore, because the cited reference fails to recite each and every element recited in claim 1, claim 1 is not anticipated by the cited reference and it should be deemed allowable.

For at least the foregoing reasons, claim 1 is patentable over Riley. Independent claims 10 recites a system corresponding to the method recited in independent claim 1. Accordingly, independent claim 10 is patentable over Riley for at least the same reasons as independent claim 1. Dependent claims 2-8, and 11-17 are likewise patentable over Riley for at least the same reasons as the independent claims from which they depend, and further in view of their own respective features. Accordingly, Applicants respectfully request that the rejection of claims 1-8, and 10-17 under 35 U.S.C. § 102(b) be reconsidered and withdrawn.

Rejections under 35 U.S.C. § 103

Claims 9 and 18

Claims 9 and 18 were rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Riley in view of U.S. Patent No. 5,598,158 to Linz *et al.* ("Linz"). Applicants respectfully traverse.

Linz does not supply the teachings missing from Riley described above. For example, Linz does not teach "removing a DC offset from the signal with a base line restoration circuit to obtain a base line restored signal" or "transforming the base line restored signal with a logarithmic amplifier." Claim 9 is dependent from independent claim 1, and claim 18 is dependent from independent claim 10. Therefore, claims 9 and 18 are patentable over Riley and Linz for at least the same reasons set forth above as the independent claims from which they depend, and further in view of their own respective

features. Accordingly, Applicants respectfully request that the rejection of claims 9 and 18 under 35 U.S.C. § 103(a) be reconsidered and withdrawn.

Conclusion

All of the stated grounds of objection and rejection have been properly traversed. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

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